



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 10

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OFFICE OF
ECOSYSTEMS, TRIBAL AND
PUBLIC AFFAIRS

March 21, 2011

Slater Turner, District Ranger
3160 N.E. 3rd Street
Prineville, Oregon 97754

Re: U.S. Environmental Protection Agency (EPA) Comments for the Ochoco National Forest (Forest), Lookout Mountain Ranger District; Howard Elliot Johnson Fuels and Vegetation Management Project (Project) Draft Environmental Impact Statement (DEIS) (EPA Project Number: 11-008-AFS).

Dear Mr. Turner:

This review was conducted in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. Section 309 specifically directs the EPA to review and comment in writing on the environmental impacts associated with all major federal actions. Under our Section 309 authority, our review of the DEIS considers the expected environmental impacts, and the adequacy of the EIS in meeting procedural and public disclosure requirements of NEPA.

EPA supports the proposal's purposes. We agree that moving toward a balance of sustainable vegetative conditions involves: increasing the abundance of Late and Old Structure (LOS) stands; reducing the risk of catastrophic wildfire; restoring vegetative and fuel conditions to within historic ranges of species composition, structure and condition; reducing the susceptibility of the landscape to infestation by insects and disease; increasing riparian vegetation and large tree structure in Riparian Habitat Conservation Areas; and, in the HEJ project area – enhancing hardwood communities. We also agree that the proposed treatments, including prescribed fire, would move the project area toward sustainable vegetative conditions.

In addition to supporting the proposal's purposes and agreeing that the proposed treatments appear consistent with those purposes, we note that the proposal contains several important environmentally protective elements. For one, the proposal to decommission 5.5 miles of roads – based on the recommendations of the Forest's watershed analysis - is consistent with our belief that every project with travel management decisions is an opportunity to reduce continuing road related adverse impacts on forest resources. Also, the proposal's Project Design Elements (e.g., "Any new sensitive plant sites or habitat found during implementation will be protected similarly to known populations") would indeed substantially reduce the environmental effects (i.e., short-term uses) of the proposed treatments.

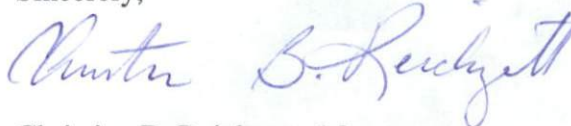
While adverse environmental effects are substantially reduced by overall project design as well as Project Design Elements, the draft EIS does not contain sufficient information for EPA to fully assess long-term productivity benefits (i.e., movement toward sustainable vegetative

conditions). Full assessment of long-term benefits is important because full protection of the environment – for this project – can only occur when medium- and long-term benefits clearly outweigh short-term adverse impacts. Understandably, the DEIS discloses short-term impacts more fully than long-term benefits. Our enclosed detailed comments, therefore, aim to assist the Forest's analysis of long-term benefits with the goal of providing a clear basis of choice through fuller comparison to short-term impacts.

Based on our analysis of the DEIS - and primarily due to our concern that the DEIS does not sufficiently compare short-term uses and long-term productivity - we have rated this DEIS as EC-2 (Environmental Concerns – Insufficient Information). An explanation of this rating is enclosed.

Thank you for this opportunity to comment and if you have any questions or concerns please contact me at (206) 553-1601 or Erik Peterson of my staff at, (206) 553-6382 or by electronic mail at peterson.erik@epa.gov.

Sincerely,



Christine B. Reichgott, Manager
Environmental Review and Sediment Management Unit

Enclosures:

EPA Detailed Comments on the Howard Elliot Johnson Fuels and Vegetation Project Draft
Environmental Impact Statement
EPA Rating System for Draft Environmental Impact Statements

EPA DETAILED COMMENTS ON THE HOWARD ELLIOT JOHNSON FUELS AND VEGETATION PROJECT DRAFT ENVIRONMENTAL IMPACT STATEMENT

Hydrology and Aquatic Species

With regard to the proposal's potential impacts to stream shade, EPA is primarily interested in the long-term comparison between no-action and the action alternatives. According to the DEIS, "Immediately after treatment, sites would have reduced cover until the aspen and other broadleaf shrubs can respond." The DEIS concludes, and we agree, decreases in shade from proposed treatments would be temporary - "Shade over streams would improve and reduce stream temperature."

While we agree that decreases in shade would be temporary, we do not believe the DEIS sufficiently supports with evidence the conclusion that, "...conifer thinning would...improve long term shade development." We believe the FEIS could more fully assess the long-term shade differences between no-action and action by supporting with evidence - in addition to general principles - predictions of long-term increases in shade. We are especially interested in long-term shade effects from proposed treatments (including hardwood restoration) because all three of the 303(d) temperature impaired streams in the project area (Fox Creek, Howard Creek, and Indian Creek) fall below the 80% shade target.

Recommendation:

- We recommend the FEIS include additional information on whether the action alternatives would result in increased shade relative to no-action over the medium and long-term. Please disclose, if available, relevant evidence or support of hardwood restoration resulting in increased shade.

We appreciate the monitoring elements proposed in the DEIS, especially those related to flow, turbidity, suspended sediment, temperature and shade. Because we are interested in long-term shade effects, we particularly support pre- and post-shade monitoring.

Recommendation:

- We recommend that the FEIS include additional information on pre-and post-shade monitoring for hardwood improvements. If possible, this monitoring should be connected to medium and long term desired shade results (e.g., 'no decrease' or 'increase').

One key difference between Alternatives 2 and 3 is that Alternative 2 includes both commercial and non-commercial thinning in RHCAs, while Alternative 3 includes only non-commercial thinning in RHCAs. We are interested in whether the Forest's analysis indicates differences in effects for stream temperature related to the action alternatives' different degrees of commercial and non-commercial thinning.

Recommendation:

- We recommend the FEIS discuss predicted stream temperature differences, if any, between Alternatives 2 and 3.

We support the commercial thinning project design element, "Trees which are of a large enough size and located such that they could contribute large wood (6" + diameter) to a stream channel will be retained during commercial harvest activities." We appreciate this element's specific size criterion (6" + diameter) and believe that more information on the design element's location criterion (i.e., how will the Forest determine that a tree "could contribute large wood" to a stream channel?) would be useful.

Recommendation:

- We recommend the FEIS include additional information on how the Forest will determine which trees could contribute to in-channel large woody debris.

The DEIS references a "shade standard" but does not explicitly disclose what that standard is, or where it comes from.

Recommendation:

- The FEIS should disclose what the relevant shade standard is and where it comes from.

Forested Vegetation

With respect to the predicted long-term benefits of increased LOS, we are concerned that although the DEIS predicts an overall increase in single-strata LOS, the rate at which single-strata LOS would develop is lower for Alternative 2 than it is for Alternative 1.

The DEIS states, "Alternative 2 would result in the greatest increase of single-strata late and old structure over time." We agree with this conclusion both quantitatively and qualitatively. To more fully assess this difference we believe the FEIS should note that although Alternative 2 is projected to result in the greatest overall increase of single-strata LOS - Alternative 2 also, actually, is projected to decrease the rate at which single-strata LOS develops relative to no-action. According to Tables 39 and 40, the rate of single-strata LOS growth under Alternative 1 from years 0 – 20 would be 56%. The rate of single-strata LOS growth under Alternative 2 from years 0 – 20 would be 41%. Single-strata LOS growth under Alternative 1 continues to outpace Alternative 2 from years 20-30 and years 30- 50 (16% vs. 12% and 18% vs. 14% respectively).

Recommendation:

- To more clearly express the medium- and long-term effects of the active vs. passive management on LOS development, we recommend that the FEIS consider incorporating the ongoing influence of repeated active management (commercial and non-commercial thinning and prescribed fire) vs. repeated no-action determinations on LOS development. Quantitative vs. qualitative.

We are concerned that the DEIS emphasizes the action alternative's total 20 year LOS increase over existing conditions (42%) without noting that the no-action alternative's total 20 year LOS increase over existing conditions is just 3% less (39%).

Recommendation:

- We recommend that the FEIS more clearly note the relative difference in total LOS development between the action and no-action alternatives. Total medium- and long-term LOS development with repeated active management vs. repeated no-action coupled with active fire exclusion would more clearly provide a basis for choice between action and no-action.

Because the departure from historic conditions plays such a central role in the DEIS's analysis, we are concerned that the DEIS does not describe how historic conditions were estimated. The DEIS does sufficiently disclose how existing conditions were estimated, e.g., "Satellite imagery from 2004 has been used to determine the current distribution of seral structural stages."

Recommendation:

- We recommend that the FEIS describe how historic conditions were estimated for the project area. Please list key data sources and describe how historic ranges were determined.

Fire and Fuel

EPA is familiar with the tool - Fire Regime Condition Class (FRCC). FRCC is commonly used to provide information to answer questions such as, "Would fire regime conditions move toward those that occurred historically..." This question, and several related questions, are decision factors in the DEIS. According to the National Biological Information Infrastructure homepage on FRCC, FRCC is a tool, "...for determining the degree of departure from reference condition vegetation, fuels and disturbance regimes."¹ The DEIS does not refer to FRCC, but, does refer to "Condition Class". Also, according to the DEIS, "Condition Class describes changes in stand conditions and fire effects caused by fire exclusion." We are unsure whether this NEPA analysis used FRCC.

Recommendation:

- The FEIS should clarify whether and how the condition classes used in this Project's analysis relates to FRCC, and, if so, the FEIS should disclose the acreage of various Fire Regimes proposed for treatment within the project area.

EPA supports reductions in the risk for uncharacteristic wildfire and believes that moving fire regime conditions toward those that occurred historically is environmentally beneficial. The DEIS's Fire and Fuels analysis, overall, discloses that the action alternatives would trend toward decreasing the risk for uncharacteristic wildfire. Tables 2, 48 and 51, as well as the descriptions found throughout the document, generally show that, in the short term, stands "at risk of loss" and fire regimes outside of their historic range of variability would decrease. We are concerned, however, that the DEIS does not estimate or disclose how the project, or the Forest over time, would maintain decreases in wildfire risk in the medium and long term.

¹ <http://frames.nbii.gov/portal/server.pt/community/frcc/309/home/1397>

Recommendation:

- The FEIS should include additional information on project effects (reductions in stands “at risk of loss” and stands outside HRV) in the medium- and long-term. Consistent with our recommendations above for LOS development, we recommend the Forest consider including more information comparing the medium- and long-term effects for wildfire risk reduction associated with repeated active management vs. passive management coupled with fire exclusion.

EPA’s analysis of Tables 48 and 51 suggests that the Canyon Vegetation and Fuels Management Project and Lookout Mt. Prescribed Fire Project will actually increase the percentage of high burn probability and high hazard acres within the project area. This seems counter to these projects’ likely purposes to decrease high burn probability and high hazard acres. According to Table 51, under Alternative 2, the cumulative effects of implementation of the HEJ, Canyon Vegetation and Lookout Mt. Project would result in 20% of the project area remaining at medium to high risk of loss. According to Table 48, under Alternative 2, the direct and indirect effects of the HEJ project alone – without the Canyon and Lookout Mt. projects – would result in 15% of the project area remaining at medium to high risk of loss.

Recommendation:

- EPA generally assumes that fuels, vegetation and prescribed fire projects are designed to be complimentary; that they would combine to cumulatively decrease burn probability and hazard greater than what could be achieved with one project alone. The FEIS should clarify whether and how the three projects considered under “Fire and Fuels” cumulative effects combine to increase or decrease burn probability and hazard relative to the HEJ Project alone.

A project purpose, “Reduce wildfire hazard within areas identified as “at risk of loss””; and a decision framework question, “Would surface fuels, ladder fuels, and stand density be reduced to decrease the hazard within areas identified as “at risk of loss?”” rely on the phrase “at risk of loss”. The phrase “at risk of loss” is not defined in the DEIS.

Recommendation:

- The phrase “at risk of loss” should be defined in the FEIS

We are concerned that although several conclusions for Forested Vegetation and Fire and Fuels are similar (e.g., departure from historic conditions) the analyses have distracting differences. One, the Forested Vegetation section focuses on “single-strata Late and Old Structure” while the Fire and Fuels section focuses on large and x-large single-strata forest. These appear roughly similar, yet the existing acreage is substantially different, 452 acres and 8 acres respectively. Two, there is a cumulative effects analysis for “Fire and Fuels”, but, there is no cumulative effects analysis for “Forested Vegetation”. Three, the “Forested Vegetation” analysis covers multiple time frames (e.g., 0-20, 20-30, 30-50), and, the “Fire and Fuels” analysis does not cover multiple time frames.

Recommendations:

- The FEIS should include additional information on the use of different forest structure categories for "Forested Vegetation" and "Fire and Fuels".
- The FEIS should either include a cumulative effects analysis for "Forested Vegetation" or explain why one is not relevant to the decision.
- The FEIS should either incorporate multiple time frames into the "Fire and Fuels" analysis or describe why these projections are not needed.

Range – Project Design Elements

According to the DEIS, livestock grazing is one of the activities which has, "...contributed to erosion, channeling and vegetation removal of streambanks in the project area." Erosion, channeling and vegetation removal have led to changes in water quality – "...including higher maximum summer water temperatures, high sediment load, simplified habitat, and increased peak flows and frequencies."

To address range management concerns related to prescribed fire, the DEIS proposes useful elements. For example, "To ensure recovery of native vegetation, encourage expansion of native vegetation into areas where vegetation and/or organic layer has been removed, and reduce the risk of introduction or spread of invasive plant species, pastures will be evaluated after burning to determine if rest is required or other adjustments to livestock grazing need to be made in order to meet resource objectives.", and, "Range readiness is monitored annually prior to turn-out of livestock and elements are as described under "Range Readiness Criteria," above."

We are concerned that the above project design elements are: (i) limited to "Criteria that apply to Prescribed Fire Treatments" and (ii) insufficiently disclosed because "Range Readiness Criteria" are not defined in the DEIS.

Recommendations:

- We recommend that the above two prescribed fire-range management project design criteria be incorporated in the FEIS as "Criteria that apply to all treatments".
- To ensure the full and rapid recovery of RHCAs, we recommend the FEIS include additional information on the implementation and effectiveness monitoring that would be conducted relative to range management related water quality measures/ Project Design Criteria.

Non-native Invasive Plants

According to the DEIS, "Alternatives 2 and 3 have 6 HIGH risk factors." for the introduction and spread of noxious weeds. We are concerned that the DEIS does not disclose these risk factors. We are also concerned that the "Noxious weeds" project design features are not explicitly linked to the project's high risk factors.

Recommendations:

- We recommend that the FEIS disclose the risk factors considered in this proposal's non-native invasive plant analysis.
- We recommend that the Forest explicitly link "Noxious weeds" project design criteria to identified high risk factors.

- We also recommend, if possible, that this proposal include plans to treat the seven identified weed infestations in the project area.

Climate Change

We appreciate the DEIS's discussion of the Project's potential effects on Global Climate Change and the Carbon cycle. We agree with the DEIS's overall conclusions that "Projects that create forests or improve forest conditions and capacity to grow trees are positive factors in carbon sequestration." We also agree that this project's "...proposed activities fall into this category."

While the DEIS adequately discloses the likely overall effect of the proposed Project on climate change, we are concerned that the DEIS does not include sufficient information on the effects of climate change on the proposed project. The context for this concern is grounded in the Forest Service's useful NEPA Climate Change guidance, which states, "Consider whether climate change may affect the ability to reach a desired condition. For example, the success of the proposal to restore aspen in a particular location may be reduced by expected warmer temperatures and lower rainfall during the next century."² Indeed, we support this proposal's specific purpose to "enhance hardwood communities" as well as purposes to maintain and improve forested vegetation, and, water quality, etc.

Recommendations:

- To address whether climate change may affect the proposal's ability to meet identified purposes, we recommend the FEIS include additional information on the effects of climate change on this proposal. The following determination from the DEIS's "Climate Change and Invasive Plants" sub-section provides a useful example, "All actions are consistent with recommendations for management response in the face of potential influences of climate change on invasive plants." Similar, briefly supported, determinations for other resources (e.g., Forested Vegetation) could help to disclose that this proposal's NEPA analysis has considered the effect of climate change on the proposed project, and, that the proposal is consistent with recommended management responses to climate change.
- If an action is found to be inconsistent with recommendations for management response in the face of potential influences of climate change, we recommend the FEIS incorporate appropriate management responses.

Decision Framework

We are concerned that the decision framework questions do not address the DEIS's "Key Issues". For example, although soil productivity, the spread of noxious weeds and wildlife habitat connectivity are elements of the proposal's two key issues, they are not addressed in the responsible official's decision framework questions.

² http://www.fs.fed.us/emc/nepa/climate_change/includes/cc_nepa_guidance.pdf

Recommendation:

- We recommend that the DEIS's two key issues be explicitly addressed as decision framework questions.

Coordination with Tribal Governments

We appreciate that Government to government notification of the proposed action was submitted to four tribes by mail. We are unsure, however, whether the tribes responded, and, if so, what their response was.

We recognize the EIS's conclusion that the alternatives "...would have no impact on the treaty rights of Warm Springs tribal members because no roads would be closed that may affect access to traditional use areas." While access may be maintained, other aspects of this project could impact the treaty rights of the Warm Springs, or other tribes, by adversely effecting traditional uses and/or use areas (e.g., traditional plant areas in the Lookout Ranger District).

Recommendations:

- We recommend the FEIS disclose whether the Forest received a response(s) from the tribes and, if so, what the tribes' issues or concerns may have been.
- We recommend the FEIS disclose whether the alternatives would impact traditional uses and/or traditional use areas. If the Forest has received related information from tribes on this issue, the FEIS should include the tribes' issues and concerns.

**U.S. Environmental Protection Agency Rating System for
Draft Environmental Impact Statements
Definitions and Follow-Up Action***

Environmental Impact of the Action

LO – Lack of Objections

The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC – Environmental Concerns

EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO – Environmental Objections

EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU – Environmentally Unsatisfactory

EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 – Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 – Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 – Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.